

**METHOD TO DETECT MOLECULAR BINDING BY SURFACE-ENHANCED  
RAMAN SPECTROSCOPY**

**ABSTRACT OF THE DISCLOSURE**

Provided herein are methods for detecting molecular binding using surface enhanced Raman spectroscopy (SERS). The SERS signal can be generated by associating one of the binding partners with a SERS-active particle or substrate. Binding is detected by detecting a change in a SERS signal after two binding partners are contacted with each other as compared to before the binding partners are contacted with each other. The method is useful for detecting binding of biomolecules such as antibodies to antigens and receptors to ligands.